

AMENDMENT TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claims 1-22 (canceled).

Claim 23 (previously added): A method for the detection or determination of histamine in a sample of microdialysates or dialysates, comprising the steps of:

(A) applying said sample to a biosensor comprising an electrode and (i) a mono-enzyme system of an amine oxidase, which is a copper-containing grass pea oxidase (E. C. 1.4.3.6) or (ii) a bi-enzyme system of an amine oxidase, which is a copper-containing grass pea oxidase (E.C. 1.4.3.6), coupled with horseradish, soybean, tobacco, sweet potato or palmtree peroxidase; wherein said electrode is a carbon/graphite based electrode, and whereby said amine oxidase is cross-linked to the electrode into an osmium based redox polymer; and

(B) detecting an electrical output from said biosensor.

Claim 24 (previously added): The method according to claim 23, wherein the peroxidase is horseradish peroxidase.

Claim 25 (previously added): The method according to claim 23, wherein the osmium based redox polymer includes poly(1-vinylimidazole) complexed with $[\text{Os}(\text{4,4'}\text{-dimethyl-bipyridin})_2\text{C1}]^{+/2+}$ and polyethyleneglycol)diglycidyl ether as the cross-linking agent.

Claim 26 (previously added): The method according to claim 23, wherein biosensor is of Type I, Type II or Type III type of biosensor, wherein:

Type I: the mono-enzyme or the bi-enzyme system is added directly into the electrode surface; or

Type II: the mono-enzyme or the bi-enzyme system is entrapped in the osmium based redox polymer added on the surface of the electrode; or

Type III: the mono-enzyme or the bi-enzyme system and the osmium based redox polymer forms sequential coatings added on the surface of the electrode.

Claim 27 (previously added): The method according to claim 26, wherein the biosensor of Type III is one of Type III a, Type III b, Type III c or Type III d, wherein:

Type III a: a second coating of the mono-enzyme is coating a dried layer of peroxidase and redox hydrogel; or

Type III b: a second coating of peroxidase and redox hydrogel is coating a dried layer of the mono-enzyme; or

Type III c: a second coating of the mono-enzyme entrapped in redox hydrogel is coating a dried layer of peroxidase; or

Type III d: a second coating of peroxidase is coating a dried layer of mono-enzyme entrapped in redox hydrogel.

Claim 28 (previously added): The method according to claim 24, wherein the weight ratio of amine oxidase to horseradish peroxidase is 80:20.

Claim 29 (currently amended): A method for the detection or determination of freshness biomarkers or of the content of freshness biomarkers in a food sample, comprising the steps of:

establishing a standard curve between freshness and the electrical output of a biosensor comprising a carbon/graphite based electrode and (i) a mono-enzyme system of an amine oxidase, which is a copper-containing grass pea oxidase (E.C.1.4.3.6), or (ii) a bi-enzyme system of said amine oxidase and a peroxidase, wherein said amine oxidase is cross-linked to the electrode into an osmium based redox polymer, and freshness wherein said freshness biomarkers are biogenic amines,

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applying said sample to said biosensor;
detecting an electrical output from said biosensor; and
comparing the electrical output of the biosensor when applied to the sample with said
standard curve for freshness biomarkers to detect and determine the freshness of the food sample.

Claim 30 (canceled).